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AN ILLUSTRATED HISTORY OF THE

FLUTE,

And Sketch of the Successive Improvements made in the Flute, and a Statement of the Principles upon which Flutes are constructed, with a Description of the New or

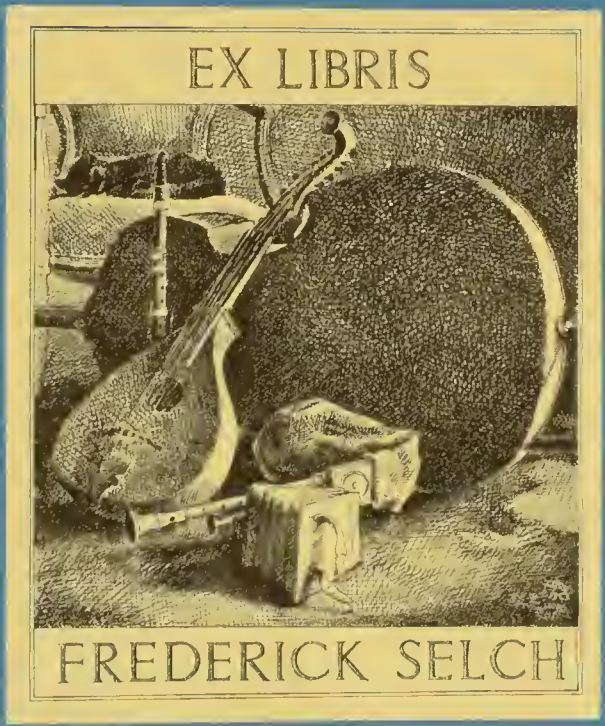
BŒHM FLUTE.

Correct Position for Holding the Flute.

BY A. G. BADGER,

MANUFACTURER OF FIRST QUALITY FLUTES,

181 BROADWAY, NEW YORK.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"Govern these ventages with your fingers and thumbs, give it breath with your mouth and it will discourse most eloquent music."

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181 BROADWAY, NEW YORK.

Firth, Pond & Co., Shaffenburg & Lewis, and C. Bruesing, New York; Oliver Ditson and George P. Reed, Boston; Lee & Walker, Philadelphia; Knabe, Gaehle & Co., Baltimore; S. W. Peters & Son, Dunton & Thurston, Cincinnati; N. Philips, St. Louis; G. A. Prince, Buffalo; Christman & Son, New Orleans; Wm. Atwell, San Francisco, Calif.; Augustus Robinson, Portland, Maine.

1861.

Introduction.

The tones of the Flute have always been considered superior to any other instrument conveying but a single part, being exceedingly rich and musical, affording a beautiful accompaniment to the human voice, piano, guitar, etc., and an indispensable auxiliary to the orchestra. The tones of the Flute, of all instruments, have the nearest approach to the human voice, and the inventor of a new musical instrument considers the relative value of the invention elevated as it approaches this standard. But notwithstanding the exceeding sweetness of its tones, the Flute has always held a subordinate rank; its former want of reliability in tone and tune, and the extreme difficulty attending the execution of intricate passages of music, rendered the Flute rather the follower than the leader, or companion, in all good musical performances; and as such immense strides towards perfection had been attained in almost all other musical instruments, the great faults in the Flute bade fair to consign it to oblivion, had not Böhm stepped forward to the rescue. He has brought the Flute out of this slough of difficulties, and it now takes its stand beside its fellows in all the essentials of a good musical instrument.

In coming before the American professors and amateurs as the maker of the new Flute, a word or two, by way of defining my position, would, perhaps, not be out of place. In England, and on the Continent, the business of manufacturing first quality Flutes has always held a position apart from that of the lower grades. The elevation of American musical taste seemed to render such a distinction necessary also in this country.

Eight years since I commenced the manufacture of first quality Flutes at 181 Broadway, New York. My mechanical education, and long experience as a Flute-maker, I felt confident, had prepared me to occupy this position, having been bred in all branches of the profession. About the time of my commencement, the first Böhm Flute made its appearance in this country. It was in the possession of a gentleman tourist, Mr. W. J. Davis, an eminent

Fluto professor of New York, examined the peculiarities of its construction, at once perceived its merits, and predicted that its ultimate destiny would bo its general adoption. He immediately engaged in its manufacture, but the undertaking proved far from profitable. He found an abundance of opposing interests. The manufacturers of the old Flute did not see the way clear for the profitable investment of their labor and capital in the new. It wanted mechanical ability they did not possess. Professors of the Flute found they must unlearn their bad habits, and consequently discouraged its adoption. All proved too much; and struggling awhile in public concerts and private exhibitions to lay the matter in its true light before the musical public he gave up in despair, and has since relinquished both the profession and the manufacture altogether. Such is usually the destiny of the leader of a great reform. Harvey, the immortal discoverer of the circulation of the blood, came near losing his life at the hands of his brothers in the medical profession. Galileo was compelled to publicly recant his heretical assertion, that the world turns on its axis. That Bœhm's invention will exert as great an influence on the world's great destiny as the cases referred to, I do not assert; yet still it is the work of a master mind, who stood a head and shoulders above his fellows, and the musical world will some day, by acclamation, award to him the tributo which is his due. Philip Ernst, of this city, a professor of the Flute, of high standing, and thirty years' experience, was the next to adopt the Bœhm Flute. His position was more commanding, and his influence among amateurs great. Many followed in his wake, and it was through the assurances of his patronage, and of its ultimate success, that I commenced the manufacture of the *Bœhm Flute*. From that time may be dated the commencement of the reform in this department of musical science in this country. Tho success of the Bœhm Flute, so far, has been greater than, under the circumstances, we should expect. A very large proportion of the amateurs in Now York, New Haven, Boston, and many more of the principal cities, now use this Flute, and it is the intention of this pamphlet to make more generally known the existence of an instrument which, if known, must be generally adopted.

181 Broadway, New York, *Jan.* 17, 1853.

THE

History of the Flute.

THE BŒHM FLUTE.

The Flute of M. Bœhm has not only taken a powerful hold upon the admiration of the musical world, but has been the means of making the imperfections of the ordinary Flute so obvious, as to urge upon the most attached to that instrument to confess that its days are numbered. I propose to enter somewhat minutely, though as briefly as may be, into the history of the Flute, and give an explanation of the successive improvements effected in this instrument, in order that those who have not an opportunity of examining the different instruments may possess the means of judging of their respective merits, and be enabled to estimate the relative advantages afforded by the ordinary Flute and the Bœhm Flute.

In answering the questions proposed, it will be necessary to give an outline of the early history of the ordinary Flute; tracing it from its simplest beginnings through various stages of improvement, up to the present time; and then to point out the superior principles upon which the Bœhm Flute is constructed, so that the causes of the defects in the ordinary Flute may be seen, and the important revolutions lately brought about, not only in perfection of tone and intonation, but a greatly increased

facility of execution—the want of this facility having been one of the drawbacks to the old system.

For the sake of perspicuity, what has to be advanced may be arranged under the following distinct heads:

1. A brief historical sketch of the steps by which the ordinary Flute has reached its present state.

2. An examination into the causes of the imperfections of the ordinary Flute, and a statement of the principles upon which Flutes are constructed.

3. What has been effected by the Bœhm Flute in Europe, and what in this country.

4. Miscellaneous extracts; letter from Professor Ernst, letter from Professor Kyle, letter from Professor Ainsworth.

5. Hints as to the proper study of the Flute.

PRIMITIVE FLUTE.

1. A brief Historical Sketch of the Steps by which the Ordinary Flute has reached its present State.

The Flute, under different forms and names, may be traced to the remotest periods of antiquity. Most of the ancient poets ascribe its invention to no less personages than gods and goddesses. Even the grave Plutarch, in his Dialogue, "Hepi Mosikes," attributes it to Apollo. Lucretius, however, contents himself by deriving its origin from the breathing of western winds over certain reeds, and thus, he tells us, was suggested to man the rural pipe, the simple tube, which the ingenuities of later ages have improved into one of the most fascinating instruments of which art can boast. The word is said to be derived from the Latin *flauto* (Lamprey), a kind of eel, which has seven holes lengthwise in its side, and when extended resembles a very narrow Flute. The ancient Flute had some sort of mouth-piece. It was double as well as single—that is, was often composed of two tubes, both played together, and hence it has not unreasonably been

inferred that the enlightened nations of antiquity possessed some knowledge of harmony. The Flute was almost universally employed by the Greeks and Romans in keeping the voice up to its proper pitch. But I do not propose to enter minutely into the subject of the Flute of the ancients. The extraordinary popularity of the Greek Flutes, the numerous varieties of this instrument in use among them, their forms and capabilities, and the various and singular uses to which they were applied, would form a highly interesting topic, were this the fitting opportunity. At present I intend to speak more particularly only of the more modern Flute.

The ordinary Flute, originally known as the German Flute, is mentioned by Mersenne in his great work published in Paris in 1636; but it is evident, from the manner in which he introduces and describes the instrument, that it was then but little employed. The Flute in general use at that time was the *Flute-à-bec*, termed also the *English Flute*, and by the French *la Flute deuce*. The Flute-à-bec was held perpendicularly (to the mouth) like the clarionet.

At the commencement of the last century the German Flute, which, in allusion to the position in which it was held, was also termed the *Flauto traverso*, or Transverse Flute, began to divide the public favor with the Flute-à-bec. The superiority of the German Flute over the Flute-à-bec consisted in its improved quality of tone and somewhat better intonation. On the Flute-à-bec no skill of the performer enabled him to vary, to any extent, the quantity and quality of its tone, or the pitch of the notes, owing to its being voiced with a tongue, like the pipe of an organ, or like a common whistle; but on the German Flute the notes were produced by the immediate agency of the lips; comparatively a greater variety of tone, and certain improvements, even as to intonation, were consequently obtained.

At that time the German Flute had but six holes, which were stopped by the first three fingers of each hand.

From these holes, combined with the note given by the entire tube—that is, when all the holes were closed—was produced the diatonic scale of one key or mode—that of D major. Shortly after, however, an additional hole was added by Philibert, a Frenchman, stopped by a key (D sharp or E flat). This, which constituted the one-keyed Flute, or Flute with seven holes, as seen in the one-keyed Flute of the present day, was a death-blow to the Flute-à-bec. It improved the quality of some of its tones, and extended its compass upward. Many a kindly prejudice, many a grateful recollection of past enjoyment, was enlisted in favor of an old servant, and lingered to the last, but in vain! The Flute-à-bec is now among the things that were, or is to be met with only in the hands of the antiquary.

The Flute remained in this state until the time of Quanz, who flourished from about the year 1720 to 1770, and was celebrated as a performer upon the Flute, and as a composer for that instrument. He was also celebrated as a manufacturer of Flutes. He added another D sharp or E flat key, and contrived a method of lengthening and shortening the head-joint, so as to raise or lower the pitch half a tone. The discovery of this additional key was made in 1726, and the new head-joint in 1752. The use of the latter is obvious, but it has puzzled the critics to divine what could possibly have been the object of this additional D sharp key, which, in conjunction with the new tuning-head, were said at the time to have corrected "all the imperfections of this instrument in point of bad notes and false tuning." They could not suppose it intended to make the inharmonic difference between D sharp and E flat. This would have been attributing a refinement of perception to Quanz utterly inconsistent with the obtuseness of ear which could endure the extreme imperfection, not only of the chromatic, but of the diatonic intervals of his instrument. We know by the Flute music of his time, that several of the scales nearest related to that of D major were then employed, as well as the chro-

matic scale; but we know also, by a reference to the one-keyed Flute of the present day, how grossly defective all these were—all the notes not belonging to D major having been produced by what may be termed artificial fingerings, and the scale of D major itself having been also, as will shortly be shown, very imperfect. That it afforded no great advantage, may be concluded from the fact that the application of it was ultimately discontinued.

The next great improvement was the addition of three other holes, stopped by three additional keys, constituting the four-keyed Flute—that is, the Flute with ten holes. Some difficulty has been experienced in ascertaining the exact time of the introduction, and the name of the originator of these keys; but the most approved authorities among the Germans give the honor of this contrivance to Joseph Tacet, an Englishman, who was popular both as a performer on and as a manufacturer of the Flute, in London, about seventy years since. This was really a great step in the progress of the Flute. The notes G sharp or A flat, A sharp or B flat, and F natural, were, by means of these keys, produced upon the same principle as the D sharp or E flat, which had been obtained by the first key and the notes of the original six holes; and thus all the notes of the chromatic scale in the fundamental octave, excepting the C natural, were each produced by opening its legitimate hole, and the artificial fingerings for these notes, which produced tones of wretched quality and intonation, were no longer necessary. This improvement, great as it was, made its way at first but slowly. It was not until the beginning of the present century that the four-keyed Flute began to be generally adopted in the English orchestras.

After this the attempt was made to obtain a C natural by means of a key, the artificial C of the four-keyed Flute fingered thus, 0 2 0 | 1 2 3, being very imperfect. For this purpose a long key, acted upon by the first finger of the right hand, known as the C shake key, was added; but although a good note was thus produced, it has been of little use, excepting in the shake with B, owing to the

necessity, when using it, of moving the right hand About the same time the tube was lengthened, and two long keys were added at the foot of the instrument, giving the two additional low notes, C sharp and C natural. This was the seven-keyed Flute.

The duplicate long F key, acted upon by the little finger of the left hand, was next added, to facilitate the execution of the notes D natural or E flat, in connection with F natural; and thus was completed the ordinary eight-keyed Flute. As many as seventeen keys have been added to some Flutes, but the standard number has long been eight. Attempts were also made, from time to time, to improve the tone of the instrument, by enlarging the holes, and by variations in the bore. Joseph Tacet, before mentioned as the originator of the four-keyed Flute, made experiments with large holes, as also did the late Mr. Nicholson. These will be further referred to in another place. But these efforts, both as to the size of the holes and the variations in the bore, could only be partially successful, owing to the radically incorrect position of the holes and the erroneous principle upon which the keys were constructed. We have now to consider the grounds and proofs of these imperfections, which constitute the main causes of all the defects in the ordinary Flute.

2. An Examination into the Causes of the Imperfections of the Ordinary Flute, and a Statement of the Principles upon which Flutes are Constructed.

From the preceding brief sketch it will be seen that the ordinary Flute has made great progress during the last two hundred years. Originally an instrument of six holes, stopped by six fingers, and producing but one diatonic scale, it has now fourteen holes, the additional eight being stopped by keys, thus affording the means of playing the twelve diatonic scales, major and minor, as perfectly, to say the least, as the original scale of D

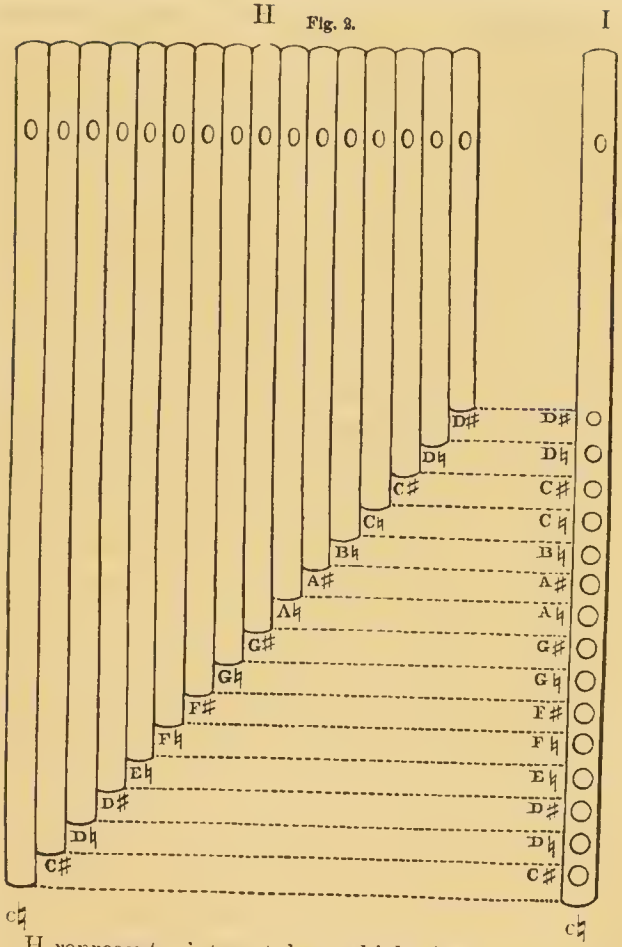
major. This great advance as to the resources of the instrument was necessary, in order to meet the increasing demands of modern scientific music. The successive steps by which the Flute thus advanced correspond in some measure to the progress made in the musical art itself. Modern instrumental music was in its infancy two hundred years since. The first instruments, after the organ, which felt the influence of modern science, were those of the violin class. At the time when these instruments combined considerable facility of execution with perfection of tone and intonation, the wind instruments were still to be found chiefly in the hands of itinerant musicians; and the subsequent improvements as to tone and intonation upon them, did not keep pace with their development in other respects. It is on this account that the great classical composers have neglected them.

The chamber music of Haydn, Mozart, and Beethoven for the violin and other stringed instruments, forms, perhaps, the largest portion of their works; while scarcely one piece of this class, for the Flute and other wind instruments, can be found among them. This can have arisen from no other cause than the imperfections of the latter, especially from the inequality of their tones and the incorrectness of their intonation. These defects are proverbial; and the Flute being the most conspicuous in the orchestra, as well as the most popular of these instruments, notwithstanding the charm peculiar to its tone, has always received the greatest share of this odium. As early as the year 1725 Quanz, the eminent flutist before mentioned, being on a visit to Naples, entreated his countryman, Hasse, to introduce him to the celebrated Scarlatti, under whom Hasse was studying. His friend was anxious to do so, but upon mentioning him to the old composer he said, "My son, you know I hate wind instruments; they are never in tune." To the same purport, nearly a century later, a leader being much concerned that he had but one Flute in his band, on an occasion when the celebrated Cherubini was to be the conductor,

observed to him, "What, sir, is worse than one Flute?" "Two," was the composer's laconic reply. Although this witticism was uttered when the Flute probably had still but one key, yet the reproach involved in it applies with equal force to the ordinary Flute of the present day. Let the performer upon the ordinary Flute attempt to sound each note of a Flute of this class (where no extraordinary care has been taken in its construction) in unison with those of the violin, or of the piano-forte, and the force of this last remark will be at once apparent. The smothered and inferior quality of the majority of the tones will also by this method be clearly perceptible.

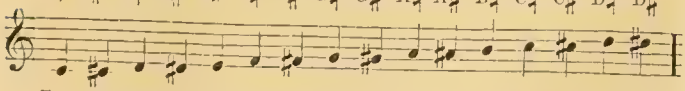
This Flute has two great defects; it is out of tune—some of its notes being too flat, and some too sharp; and it varies in quality of tone—some of its notes being free and clear, and others feeble and muffled. The two principal causes of these defects are, *the unequal distribution of the holes*, some being above and others below their correct position, and the existence of closed or shut keys. That these are the causes of the imperfections of this instrument will be demonstrated by a very brief examination of the principles upon which the fingered wind instruments are, or obviously should be, constructed.

Let us first suppose a tube without any finger-holes, which, when sounded, will give the note C natural, the lowest note of the Flute. If this tube be now shortened by cutting off about an inch and a quarter from the open end the sound given will be C sharp, which is half a tone still higher. If another piece of the same length be cut off the sound produced will be D natural, which is half a tone still higher. Proceeding in this manner, with a slight diminution of distance as the tube is shortened, fourteen or more semitones will be elicited. Now, the same effect is produced, if, instead of cutting sections off the tube, so as to form so many different tubes, holes, or apertures, are bored in a single tube, at distances corresponding to the sections cut off. The annexed diagram will illustrate this.



H represents sixteen tubes, which give the notes

C♮ C♯ D♭ D♯ E♭ F♭ F♯ G♭ G♯ A♭ A♯ B♭ C♭ C♯ D♭ D♯



I represents the single tube C natural, with holes bored at distances corresponding to the lengths of the sixteen tubes of H. These being stopped and afterward suc-

cessively uncovered from the open end, will give the same scale of sixteen half tones.

These notes constitute the fundamental series of the instrument, each note being the representative of a separate tube. The next series of notes obtained from the instrument, which are the octaves of these, are really the first series of harmonies arising from the fundamentals, being produced by dividing the column of air into two by the action of the lips. In a similar manner—that is, by a further division of the column of air—the third octave is produced. The notes, therefore, of the second and third octaves are obtained from the fundamental series. The thirty-seven notes included in the three entire octaves of the Flute are not the representatives of thirty-seven different tubes, as has been erroneously supposed, but are naturally generated by the tubes or holes of the fundamental series only.

From this statement it will be seen that the notes of the fundamental series and these harmonies are high in pitch as the uncovered holes approach the head or closed end of the tube, and are low in pitch as they approach the foot or open end; it consequently follows, that if a hole be placed above its correct position, the note will be too high in pitch, or sharp, and if below it, that it will be too low or flat. It is also clear that the nearer the holes are in size to the diameter of the tube, the freer and finer must be the tones.

The most perfect intonation that can be obtained upon an instrument, the sounds of which are fixed by the manufacturer, is that produced by tuning them according to what is termed "equal temperament," agreeable to which the holes of the Flute should be placed at equal relative distances apart. Equality of tone also can only be obtained by means of equal-sized holes. Bearing this in mind, the following diagram will show one of the causes of the unequal tones and incorrect intonation of the ordinary Flute. K represents the holes as they are bored on the most perfect of the ordinary eight-keyed Flute, com-

monly called the large-holed Flute. The holes are placed in a straight line, and without the keys, in order to show their relative size and position. It is obvious that equal tone and temperament can not be possessed by this instrument, there being scarcely two holes placed together under these requisite conditions. It is true that by making those holes which are placed above their correct positions smaller, the pitch of the notes is somewhat lowered; but in the application of this means of avoiding the difficulty, the manufacturers were limited, being met by another of not less consequence, viz., the muffled or smothered quality of tone yielded by the small holes thus placed.

Fig. 3.

The second great defect in the construction of the ordinary Flute is connected with the first, and partly the cause of it, as will presently be explained. This is, the use of keys which are closed by their own springs, termed *closed* or *shut* keys. To demonstrate the nature of this defect it is only necessary to observe, that if the hole immediately below another which is opened to produce a note be closed, the note becomes weaker in tone, and lower in pitch, constituting what is termed a *veiled note.* If two holes be opened to produce a note, and the hole immediately below be closed, the note will be slightly veiled if the holes are small—that is, the tone will be somewhat enfeebled, although the intonation will not be injured; but if the holes are large the note will not in this case be perceptibly affected. On the ordinary Flute there is but *one hole* open between the holes which give the notes F sharp, A natural, B natural, and C sharp, and the closed keys, F natural, G sharp, B flat, and C natural. These are therefore veiled notes of the worst character. Between the F natural and G sharp closed keys, and the notes G natural and B flat, there are *two holes* open; these open holes being all small excepting one, these notes

also are slightly veiled. In the two first octaves of this Flute there are no less than twelve notes out of the twenty-four rendered imperfect by these four closed or shut keys; and when to this imperfection is added that which arises exclusively from the smallness of some of the holes, it will be found that twenty of the twenty-four notes are more or less defective in regard to quality of tone. The only really pure, full, and perfect notes being the lowest C natural, C sharp, D natural, and D sharp. In the highest octave the disarrangement of the holes is such, owing chiefly to the closed keys, that the correct vent holes can not be employed. These being placed too high, the notes are found to be much too sharp. The vent holes of the half tone lower are therefore used, and these make them too flat. The bad effect of closed keys may be illustrated by reference to the diagram, page 13. Suppose a person were to place his hand near the open end of one of the tubes represented by H, while sounding the note yielded by it, the effect would be to deaden the tone and lower its pitch by altering and checking the volume of air, and this in proportion to the nearness of the hand. It is on this principle that the closed notes of the French horn are produced, and this is the cause of their muffled quality. Any Flute-player may satisfy himself upon this point by sounding the note A upon his Flute, at the same time opening and closing the G sharp key.

In order to see how these defects originated and were perpetuated, we must refer to the Flute as made at the early period, when it had merely six finger holes. The opening successively of these six holes, as before observed, combined with the note produced when they were all closed, gave, though incorrectly, the scale of D major. The reason why even this scale was incorrect is, that the holes were placed so as to come within the reach of the fingers. As the fingers do not happen to vary in length corresponding to the half and whole tones required (the idea of keys to give artificial length to the fingers not occurring to our forefathers at that early stage of music's

progress), some of these original notes were necessarily too flat, and others too sharp; and as, when keys were successively added, in order to obtain the chromatic scale, this faulty arrangement of the original holes still remained, the ordinary Flute, as to intonation, is nearly as incorrect as it was two hundred years ago. Fig. 4 shows the incorrect position of the holes of the ordinary Flute more fully by placing it by the side of the tube as explained in No. 1. Fig. 4 will illustrate more fully the real difference in the positions and size of the holes between the ordinary and the Bœhm Flute. No. 2 represents the medium-sized hole ordinary Flute. No. 1, the tube of the Bœhm Flute without the keys; the dotted lines show where the holes should be on the ordinary Flute to be correct. The tone received some improvement when the D sharp key was added. By keeping open this key with the little finger of the right hand it acted virtually like one of the open keys lately introduced, rendering some of the notes near it much fuller and clearer. Those in the highest octave were also improved. In the same manner, when the F natural key was added, those desirous of an improved quality of tone were enabled to keep this key also open for the notes above it, thus using it as an *open key* whenever practicable, and admitting, in fact, the principle and advantage of open keys. It was not possible to use the G sharp and B flat as *open keys* in the same manner, because the notes A natural and B natural, being produced by the holes next above these keys, would have been too sharp in pitch.

Fig. 4.

No. 1. No. 2.

On this subject we can only regret that it never occurred to any one before Bœhm's time, that a key is more easily kept open by a spring than closed; and that thus the holes under the keys might have been acted upon like the other holes. To regret this, however, is akin to lamenting, if we may compare small matters to great, that although numbers before Newton's day had seen apples fall to the ground, it never occurred to any to follow up the train of thought suggested from this circumstance, until he discovered by it the laws of gravitation, or that, although water had often been seen to boil, the wonderful power of steam had not sooner been applied to more important purposes.

3. What the Bœhm Principle has effected in Europe and what in this Country.

I have endeavored briefly to show the nature and causes of the imperfections in the ordinary Flute. From what has been stated, the means by which these imperfections were to be removed may now be apparent. If holes of unequal size and distance, and closed keys, produced these imperfections, they were to be corrected by holes relatively equidistant, and of equal size, combined with open keys. This, accordingly, has been the line pursued.

It is not necessary here to enter into the question whether Capt. Gordon or M. Bœhm first conceived the idea of adopting these principles, further than to observe that, "if it could be shown that Capt. Gordon was the first to experiment in that direction, it is certain that it was Bœhm who first produced an instrument upon these principles, which arrested the attention of the musical world, and proved the efficient cause of the reformation which the Flute has since undergone.

Bœhm contrived this Flute as early as 1832, but it attracted little notice until, at a session of the Academy

of Sciences at Paris, a commission was instituted to enter into a full examination of its merits. The members appointed for this purpose were MM. De Prony, Dulong, Savart, Paër, and Auber. The result of this examination was, that the commissioners gave it their full approbation, and recommended it to be used in the Conservatoire de Musique of Paris. It was not, however, until the year 1843 that it attracted much notice in the European countries.

Its auspicious introduction into the French capital, and successful progress in France, induced Mr. John Clinton, President of the Royal Academy of Music of London, and Professor of the Flute, to examine its merits, and to consider how far it might be acceptable to the English Flute-player. This examination proved highly satisfactory in all the essentials of a perfect Flute. He immediately entered into an arrangement with Messrs. Rudall and Rose, of London, to obtain the English Royal Letters Patent, and commenced its manufacture. Its success was greater than its most sanguine friends had dared hope for, and notwithstanding its high price, they numbered six hundred the first year, and it was adopted in the Royal Academy of Music by the pupils.

After Böhm had learned the English Flute-makers to make the *egg stand on its end*, the old Flute immediately fell into disuse; its smothered and unequal tones could no longer be endured; they were in want of employment, and they soon commenced inventing Flutes and applying to them these new principles, and probably no less than twenty of these modifications have successively made their appearance in London alone. But the Böhm Flute has steadily been growing in public favor. In France it is the Flute for the orchestra, for the concert-room, and the social circle. In short, the Flute now takes its stand among its heretofore more perfect brethren.

I subjoin a few extracts from the English press relative to Mr. Carte's public lectures and performances in that country:

The tone of this Flute resembles a mellow *soprano* voice, so liquid and pleasant is it; the gradations from soft to loud, and the extremes of each, seem producible in a manner I never remarked in a Flute before. The purity of the tone is remarkable, and it retains the same quality throughout the register. Mr. Carte and his Flute made a decided hit on this, their *debut;* a more hearty and genuine *encore* than that which followed his piece (a very long one) could not have been desired by artist.—*Musical World.*

The tone and intonation of this instrument appeared to be fine and correct, and as we know ourselves that defective intonation and difficulty of fingering in our Flute playing days were serious objections, and no very great improvement has been made in their manufacture, we hope this invention, as explained by Mr. Carte, will turn out to be a valuable one. The lectures were well attended, and appeared to excite much interest.—*Atlas.*

Our great musical conductors may at length rejoice that a perfect Flute is now made, and that their ears will be no longer tortured by the weak C and A natural, and the incorrect E, nor by the imperfect execution of certain Flute passages in some of the best overtures, which were really impossible of finished execution and correct intonation on the old concert Flute.—*Sunday Times.*

To illustrate this quality (that of allowing the tone to be attenuated to the merest whisper without losing the quality of sound that belonged to the fullest tones, and without changing in the slightest degree the pitch), Mr. Carte played a familiar French air, slightly varied for the purpose. The effect was thrilling. We never saw an audience more intensely spell-bound by musical sounds, whether vocal or instrumental. Mr. Carte's playing is indeed of the most masterly and finished character, and no one, on hearing him, could hesitate to admit that the

acmé of excellence must have been obtained in the construction of the Flute.—*Liverpool Courier.*

Lectures at the Royal Institution.—Mr. Carte played with remarkably good effect, both as to fullness of tone and brilliancy of execution, a fantasia upon his new Flute. His closing illustration was "Rule Britannia," with Drouet's variations, which was brilliantly given and loudly applauded. The lecturer, who excels both in his prelections and in his instrumental illustrations, was repeatedly and loudly applauded by the numerous auditory.—*Manchester Guardian.*

Mr. Carte's lectures on the present state of instrumental music, commenced on Tuesday evening, have proved, as was expected, a rich treat; his illustrations on the Flute being a class of musical performances such as the public of Liverpool have seldom an opportunity of listening to. His facility of execution is something truly wonderful; but his command over the instrument is not more remarkable than is the expressive character of his tones, and the depth of feeling which he infuses into his softer passages. The instrument which he uses is prodigiously in advance of the ordinary eight-keyed Flute.—*Liverpool Albion.*

From what has been advanced, it will be apparent that in Europe the Bœhm Flute, although at first strenuously opposed, has been steadily gaining ground in the public estimation—that it is the Flute most used in public and private performances. The introduction of the Bœhm Flute has exerted an influence different in this country, because less general. In Europe "the master" is the one whose opinion is consulted by the musical amateur in all matters pertaining to his study; in this country, the *music-seller*. The large dealer in musical merchandise also freely imparts his opinion to his country customers. Should the introduction of a so-called improvement be adverse to his

interest, it is with difficulty that it is generally introduced. In the city of New York the Bœhm Flute is now used by all of the first class of professors and amateurs, who, with very few exceptions, once used the ordinary Flute. Messrs. Ernst and Kyle have been mainly instrumental in introducing it into New York. The Bœhm Flute is also a great favorite at Yale College, New Haven, among the students, where it is performed upon and taught in the most efficient manner by Professor Ainsworth. The same success has attended it in many other of the principal cities and towns throughout the country. Where the Bœhm principle has been introduced the effect, as a natural consequence, has been to create a great dislike to the old and imperfect system. One other obstacle also which stands in the way of the general introduction of the Bœhm into this country is the difficulty of manufacturing; requiring, as it does, the most masterly mechanical skill, and at the same time a thorough knowledge of the principles on which Flutes are constructed. In the manufacture of the old Flute this high order of talent is by no means essential; being naturally so very faulty, a little deviation from the prescribed rule is not perceptible. Water and steam power are made available to produce them on the most extensive scale, and the operatives seldom know any thing of the science of music. From the foregoing remarks the reader can draw the inference that the school has not been of a character to produce a very high order of Flute-making ability; consequently it has been for the interest of the old establishments to prevent, as far as possible, the introduction of an instrument which is found so difficult for them to produce.

Miscellaneous Extracts.

From Clinton's School for the Bœhm Flute.

The first Flute of the new construction was completed by M. Bœhm, of Munich, in Germany, December, 1832, and he played upon it in public, both in Paris and

London, the following year. The Bœhm Flute offers the following advantages:

Perfection of Tune.—Because every aperture is in its proper and natural position.

Equality of Tone.—Because the holes are equal in size and distance, relatively, to the conical form of the instrument.

Superior Quality of Tone.—Because the bore of the instrument is not sacrificed (as in the ordinary flute) to a false arrangement and size of the finger-holes.

Greater Susceptibility of Sweetness.—Because every note can be produced without exertion or difficulty.

Increase of Power.—Because every hole is enlarged to the most available extent consistently with purity of sound.

The late Mr. Nicholson (the celebrated Flutist) may be quoted as an authority that large holes yield much better tones than small ones. It is true, that every hole in Nicholson's Flute was necessarily of a different size, some being about one-fourth smaller than others, and all of them at unequal distances; and therefore it must be admitted that this instrument was exceedingly imperfect, still he was enabled, by means of his consummate skill, to almost conceal its defects, not only by command of lips, but by selecting those keys and passages in which the imperfections were avoided, while at the same time he brought prominently forward the great advantage of his larger holes, in the superiority of tone they were capable of producing. It was the exquisite and full body of tone which Mr. Nicholson produced from the large holes, that induced M. Bœhm to construct his new Flute; but although he perceived that large holes were the best, he was fully aware that, while some notes were very full, others were miserably weak and out of tune; and he therefore resolved to make for himself a Flute, with large holes, but all of them alike. It was, then, to this circumstance that we are indebted for the present perfect instrument, which, in adition to the advantages I have already

enumerated, as to tone and tune, offers others of equal importance, viz.: *Much less extension of the fingers, a facility of playing in tune, and with a pure tone in every key*, because the mechanism enables us to pass with ease from one note to another. This renders "all the shakes and turns perfect." The instrument is also perfectly in tune in every key with one *fingering for each note.*

With these decided advantages, which a slight acquaintance with the instrument will render manifest, the Bœhm Flute must surely recommend itself to beginners, and especially as more can be learned upon it in twelve months than can be acquired upon the ordinary Flute in three years, and that, too, with infinitely greater ease and satisfaction to the player, and pleasure to the auditors. Many persons who have already learned the old Flute, hesitate to adopt the Bœhm system, under an apprehension that it would involve the necessity of an entire recommencement.

This impression, however, I can assure them, is an erroneous one. The Bœhm Flute may be substituted with but very little trouble, many of the notes being fingered as on the ordinary Flute; and when a fingering is altered, it has the effect of removing former difficulties, instead of continuing them; while from the general simplicity and completeness of the arrangement, it is very much easier to learn the altered fingering than to remember the constant changes of fingering which the old Flute indispensably requires.

Some persons entertain the idea that the Bœhm Flute is complicated and liable to get out of order, because its appearance is so different to the ordinary instrument; but if trouble be taken to examine the mechanism minutely, it will be found that it is not only free from complication and from liability to derangement, but that it is sufficiently strong and lasting for all purposes of a musical instrument.

I have now played upon and taught the Bœhm Flute constantly for about seven years, and I can assure the

public that the more I play upon it the better I like it, and the more confidently can recommend its adoption to others. I may add, that my pupils, whether professors or ameteurs, are equally warm in their admiration of it.

Perhaps no better proof can be given of the capability of the instrument than the fact of its being adopted in the Royal Academy of Music in London, and after a few weeks' practice upon it, not one of the pupils has again played upon the ordinary Flute, although they have had their orchestral duties to perform, as well as solos, etc.

From Clinton's Essays on the Flute.

Those who have already adopted it, feel its superiority in a much greater degree than would be experienced in playing upon an eight-keyed Flute, after an instrument with but one key, because the addition of keys only improved, but the system of Bœhm perfects the instrument. I myself practiced on the old Flute from boyhood, yet when I became acquainted with Bœhm's system I was so struck with its advantages, that I eagerly adopted it, and as I am neither the inventor nor maker of the new Flute, I trust I shall not be considered as actuated by any selfish motive in recommending its trial, which I feel persuaded will lead to its adoption as eagerly by others. As a sincere lover of the art of which I am a Professor, I conceive it to be a duty, to make known publicly a system that tends so materially to the advancement of that art, and thereby to dispense to others the means of a pleasure and gratification similar to that which I have derived from the study of it.

JOHN CLINTON,
Professor of the Flute of the Royal Academy of Music, London

The undersigned, *Professors* of the Bœhm Flute in this city, heartily concur in the sentiments professed above.

PHILIP ERNST, 395 *Broadway*
EDWARD BUSCH, *Astor House.*
J. BALLARD, *New York.*

The following Report was rendered by the Musical Committee of the Massachusetts State Fair, held at Boston, in September, 1846:

No. 808. Of the three Flutes offered, the Committee select the two Bœhm Flutes, and recommend unanimously the award to Mr. A. G. Badger, of New York, the maker, of a silver medal and diploma.

The instruments are in true tune, and of beautiful workmanship.

As a class, the Bœhm is an improvement on the common Flute, and is of modern invention. The Flute itself is undoubtedly one of the most ancient instruments used, and its use has never been discontinued, and yet it is an imperfect instrument. Its defects are to be attributed to the inexact position of the holes, which have always been pierced to suit the physical capabilities of the human fingers, and do not correspond to the fractional parts of the column of air, which will give acoustic proportions.

The consequence is, that in attempting to remedy this defect, by increasing the size and distance of the holes, an imperfect and unequal intonation is produced, and the instrument requires too much of the player to keep it in tune with itself, and with other instruments when playing concerted music.

In the Flute of Gordon, modified by Bœhm, after whom it is named, an attempt has been successfully made to remedy the inconveniences of the old instrument, by a construction in accordance with philosophical principles. The piercing of the holes, or, in other words, the regulation of the column of air within the Flute, is in accordance with the exact proportion to the size and length of the column, which will produce the true sound required. The holes have that size and that distance which are calculated to produce the right result—but the body which the instrument thus modified attains, renders the ordinary mode of fingering impractieable, and a mechanism of keys is applied, ingeniously adapted to meet the physical organization of the fingers, and to produce the required effect on

the instrument. Its mechanism is simple and elegant. The scale is as easily acquired by the beginner as is that of the old Flute. The effort required of the lungs to fill it is less difficult, and rapid passages are rendered more manageable, the tone is equal, pure, clear, and sonorous; shakes are made with great evenness and precision; and, in fine, its advantages over the ancient instrument are so many and so important, as to render it altogether probable that it will eventually supercede its use.

From the Buffalo Commercial Advertiser.

A few days since we received, through the kindness of a friend, three Flutes—one a common eight-keyed Flute, *improved;* another, a Diatonic Flute; and a third, a Bœhm Flute, from Mr. A. G. Badger, of 181 Broadway, New York. The improved common Flute is a good instrument, and in workmanship, accuracy and perfection of tone, superior to those usually in market. The Diatonic Flute is an instrument so altered in size and position of holes as to give A and E, which on the common Flute are extremely weak and imperfect, full and perfect tones. This is done by making the holes large and equal distant, and the third finger of both hands of the player to operate on keys instead of holes, causing no change in the manipulation for those notes from that of the old Flute, and so little varying in others, and these on the third octave, as to render the changes of fingering so slight, that an examination of the scale for one or two hours, with a good memory, is sufficient for one who is a proficient on the old Flute, to do justice with it to music. These arrangements, by rendering its notes so full and nearly perfect, make it vastly superior to the common Flute, *however improved.*

The Bœhm Flute is an instrument in the construction of which the principle of equality in size and distance, that is, the natural order of the size and situation of the holes, is preserved inviolate, thereby rendering its every

note full, rich, and mellow in tone, so perfectly so, as to fit it for accompanying the most perfect stringed instruments and the best trained voices, being in this respect superior even to the Diatonic. The machinery used by the fingers, instead of the keys of the Diatonic and common Flute, gives facilities, resources, and varieties of performance and execution impossible in either of the other Flutes. Difficulties which on the common Flute are almost insurmountable, are on the Bœhm removed, and no new ones created in their places. It is truly a most perfect wind instrument. One who is by nature a musician and a good manipulator, and used to the old Flute, can in one or two weeks, taking only the time usually devoted to practice by learners, become so familiar with its peculiarities as to use it without much risk of mistake and embarrassment in the character of music to which he is accustomed; in fact, the trouble of learning its use is a trifle, when compared with the satisfaction and delight of making *right* music. "The system of *harmonic* fingering," in the language of Clinton, "in the Bœhm Flute, offers resources for the execution of passages in the third octave hitherto unknown." The benefits of the perfect tone of each note are also clearly perceived in *its harmonics*, the use of which is in so many cases indispensable. We say to amateurs of the Flute, examine the Bœhm with *care* and without prejudice.*

* The Bœhm Flute has been much noticed by the press throughout the country. Many of these articles were valuable, showing that the writers were fully capable of forming a correct estimate of the manifold advantages secured by the Bœhm, or perfect system. Some of these articles I have unfortunately lost, but I have many still in my possession, which I would republish did the limits of this pamphlet permit. I have also many autograph letters from individual purchasers of the Bœhm and other Flutes of my manufacture, which may be seen at the manufactory, by those interested.

On Jan. 17th I addressed in substance to Messrs. Ernst, Kyle, and Ainsworth, the annexed note:

Gentlemen—I am now collecting matter, and am about publishing a work, the subject to be "The History of the Flute, and an account of the successive improvements upon the instrument, with a description of the new or Bœhm Fluto." My experience in such matters is, of course, worth something, but my book would by no means be complete without the asseverations and experiences of the *practical man*. You, sir, have been long and favorably known to the American musical public in the character of Professor of the instrument on which my little work will treat, and your opinions will carry with them great weight. By favoring me with a communication on the subject you will confer a lasting favor on

Your most obedient servant,

A. G. BADGER.

The following are their replies:

Letter from Professor Ernst.

New York, *January* 22, 1853.

Dear Sir—In reply to your polite request, Mr. Ernst takes pleasure in adding his testimony to the excellence of Bœhm's invention, and although much attached to the old Fluto, as a faithful companion for more than thirty years of his artistical career in Europe and in this country, he does not hesitate to acknowledge the new one as superior to all that have appeared till now. Mr. Ernst feels it also due to state that his opinion has been based upon much experience and under circumstances unusually favorable to a correct test. Having enjoyed for a series of years an influential position in London and Paris as Flutist to the Court, he has had many opportunities of investigating the diverse constructions which have been introduced, and after mature consideration he has found nothing to shake his confidence in the instrument he now uses. He would also add, that he has strong reasons to believe that Bœhm's improvements are tacitly appreciated by most people, but that the patent which debars their free use has been the greatest drawback to a general adoption. This notion is much strengthened by the very fact that recently the main endeavors of European makers have been to produce a Fluto as nearly like Bœhm's as possible, without palpably infringing upon his privileges. As such hindrance does not obtain here, it is to be hoped that we will derive fully the advantages of so valuable a discovery, and as such Mr. Ernst would recommend it most cordially.

I remain, dear sir, yours respectfully,

PHILIP ERNST,

Professor of the Flute, 397 Broadway, New York City.

To A. G. Badger, Esq.

Letter from Professor Kyle.

Mr. Badger: *Sir*—A few days since I received a letter from you, informing me that you were about publishing a work on the Flute, addressed to amateurs throughout the United States, and requesting my opinion of the Bœhm Flute.

About six years since I attended a musical party, where I met gentleman from South America, who had purchased, while in Europe, a Flute invented by Bœhm, the celebrated composer and performer, which was being generally introduced there. Upon attempting to play upon it, I found I could not execute the scale, owing to its peculiar construction. The next day, being desirous to see it again, I called on Mr. Brix, accompanied by a brother Flutist. After hearing him play on it again, I took the liberty of asking the loan of it to take the pattern, which he kindly granted. I then proceeded to Mr. Larribee's, the Flute manufacturer, and having examined it, he was so much pleased that he made from it the first Bœhm Flute made in the United States.

The first opportunity I had of testing the advantages of the Bœhm Flute over the old, satisfied me that it was an immense improvement on the latter. The question may then be asked, "Why, if you thought it so superior to the old Flute, did you not adopt it?" That question is easily answered. I was the first Flutist of the Italian Opera and Philharmonic Society, and could not spare time to study it sufficiently well to test its qualities and give me that confidence so indispensable to a public performer. When I had a cessation from these duties I immediately commenced practicing, and had made considerable progress, when I was obliged to relinquish it in consequence of being engaged to accompany Jenny Lind in her tour through the United States. After having finished my engagement with her I was called on to accompany Catharine Hayes on her tour, and on my return, to play at the Sontag concerts. I have therefore had no opportunity of giving the Bœhm Flute a fair trial, except in the way of teaching. That the principles on which the old or ordinary Flute is constructed and fingered is entirely founded in error, no one who has given the subject an examination will for a moment deny; and neither can it be denied that Bœhm's invention is founded upon principles which make the Flute as perfect as any one can desire. I have found that the main objection to its adoption by the more advanced performer, is the change in the habit of fingering, which this system indispensably requires; yet nineteen twentieths of those who have adopted it within the circle of my acquaintance have been of this class, and have soon acquired remarkable facility. One of my best scholars commenced it, and is now one of the most efficient performers in the city. Many professors also, of my acquaintance, whose duties do not call them to appear as public performers, have adopted it, and speak of it in the highest terms. Professors of

the Flute are much indebted to Bœhm for his invention, as it has been the means of numerous improvements being made on the old or German Flute, the most successful of which is the Diatonic, patented by M. Siccama, of London, on which I now play—the bore of which, and the alteration of the distances and size of the holes, were doubtless suggested by Bœhm's invention, although the fingering, with three or four exceptions, is the same as the old Flute. A short time since I saw a Bœhm Flute purchased by Charles L. Mather, Esq., one of my pupils. The bore of this Flute is different from any I have heretofore seen, and carries out an idea I had in regard to the bore in the early part of my musical career, and experimented by cutting out the lower end of my Flute, thinking it would improve the tone. The quantity and quality of tone of these more recent Flutes is certainly far superior to any I have heretofore tried, and as you inform me you are making other Flutes from this pattern, I would recommend to amateurs, before purchasing, to give you a call, and I am sure they will find the Bœhm Flute, and others, manufactured by yourself, equal, if not superior to all others. This I feel bound to say from the excellent manner in which you have made Flutes purchased by me at different times for my scholars.

Wishing you every success in your endeavors to call the attention of gentlemen throughout the country to cultivate a taste for studying this beautiful instrument,

I am, sir, yours truly,

JOHN A KYLE,

Professor of the Flute, 184 *East Fifteenth Street. New York.*

Letter from Professor Ainsworth, New Haven, Conn.

Mr. Badger: *Dear Sir*—I received the package safe Saturday evening. The new Flute is a very fine instrument, and I think will please. You write me that you are about to publish a pamphlet illustrating the history of the Flute, and wish me to give you my experience in the use of the different Flutes now claiming the attention of Flute-players. I will cheerfully comply with your request. The pleasure which the use of the new Flute has afforded me would of itself be a sufficient inducement to be the means of extending that gratification to others which I enjoy. I have been a lover of the Flute from my childhood, and after becoming somewhat familiar with its use, I found myself much dissatisfied with it on account of its imperfection of tune, and the great inequality of its tones; indeed, its defects have hitherto been so glaring that but few persons, comparatively, have ever been able to overcome its difficulties sufficiently to arrive at eminence upon the instrument. I supposed at first that the fault was with the

particular maker whom I employed, and in the hope of getting something that would please me better, I tried this and that celebrated maker, but the same difficulty, like "Banquo's ghost," was ever present. While laboring under these disadvantages, and little thinking that any radical change would ever be brought about in its construction, my attention was directed to the Bœhm system, and I confess I was at first inclined to give it the grave title of *humbug*, which, notwithstanding the progressive tendencies of the age, must be applied to every thing new. On giving it a trial, however, I soon began to think there was something in it worthy of attention. I purchased my first Bœhm Flute of you about three years since, and had used it but a short time before I entirely laid aside all my old Flutes, and I can assure you that I have had no inclination to return to them. The philosophy of the new Flute must, I think, commend itself to every rational mind. It is folly to speak of it as being so very scientific that its difficulties can not be mastered. I can only say that a few weeks' practice upon it fully convinced me that my labors would be amply rewarded; and so I have found it. I use it in giving my lessons, as well as orchestral and solo playing, and with far greater satisfaction to myself than I ever could on the old Flute. I can not too strongly recommend the new Flute to *all* who love this much-admired instrument, and especially to new beginners, for I conceive that time and money, and some grievous annoyances would be saved by taking it at the commencement.

With my best wishes for the ultimate success of the Bœhm Flute,

I remain yours, etc.,

N. D. W. AINSWORTH.

Concluding Remarks.

From what has been advanced it must, I think, be evident that the Flute has been undergoing, for a number of years, a very important development, and that this reformation extends not only to the Flute, but to all the fingered wind instruments. We have seen that the Flute and these instruments went hand in hand through similar progressive steps of improvement for a period of two hundred years, led on by the necessity of keeping pace in some measure with the march of modern scientific music; but that, owing to the very imperfect foundation upon which these improvements were built, such gross imperfections of tone and intonation still adhered to them

that they were neglected by the great masters of composition, while the folios of their more fortunate brethren of the violin class were enriched by them with mines of musical wealth. We have seen that when the increasing musical intelligence of the times arrived to such a pitch that these defects could no longer be countenanced, a successful effort to remedy them was made by Bœhm. No one will attempt to deny that Bœhm has been the great agent of this important movement; and when we consider how much courage must have been required in an individual to oppose himself to the prejudices and interests of two hundred years' growth, we must conclude that nothing but an enthusiasm inspired by the conviction that in thus exerting himself he was effecting a great and useful object, could have carried him on. The great points gained have been, we have seen, perfection of tone and intonation; the removal of these imperfections in these respects, which, notwithstanding the charm which always made the Flute popular had become proverbial—the changing it, in fact, from an instrument formed upon no principle, but as chance or empirical experiment suggested, to one constructed upon highly scientific principles. The old reproach of unequal tones and incorrect intonation can no longer be urged against the Flute by the most fastidious. Added to this, the quality of the tones, which always rendered the Flute popular, is also greatly improved. They are sweet and clear, rich and sonorous, liquid, powerful, and free. Like a beautiful soprano voice, their volume may be increased to the utmost stretch of their power, or may be decreased to a mere whisper, without affecting the intonation, in a manner never before attempted. This latter capability is, of all, the most desirable, as affording the means of embodying and conveying, at the will of the performer, every variety and every shade, even the most delicate, of musical expression. Connected with this is the facility with which the sounds are produced. They are elicited with the greatest ease, a very little breath being sufficient, so

that those with weak lungs, who might hesitate to practice on a Flute of the old shape, may use one constructed according to this principle. So little exertion does it require, that it may be played by the most delicate person.

In summing up what Bœhm has effected for the Flute, we can scarcely estimate this eminent man's services too highly. We see by the sketch before given, the successive steps by which the ordinary Flute has progressed from its primitive single diatonic scale to its present capacity of giving all the diatonic scales. It was Bœhm who stood forward to oppose the deeply-rooted prejudices engendered by this long continuance in a wrong course. It was the enduring patience and perseverance of Bœhm that opened the eyes as well as the ears of those most blinded by former prejudices, to the value and importance of equidistant holes and open keys. He convinced their senses as well as their judgment. Many who at first opposed the movement from interested motives, as well as from prejudice, have at length yielded to the force of the truth. His senses must be indeed obtuse who can not hear the superiority of the free tones gained by the open over the muffled tones of the closed system, and has discernment enough to see that various sized holes must produce notes of various quality. It was Bœhm who rendered these principles palpable; and if what I have advanced has interested the reader, or been the means of throwing light upon the subject, and thereby elevating the taste and convincing the judgment of the lovers of this instrument, I shall consider myself amply repaid for this, my first edition of the "*Illustrated History of the Flute.*"

Hints as to the Proper Method of Studying the Flute.

Philip Ernst, one of the oldest and most experienced professors of the Flute in this country, says that very few of all the pupils to whom he has imparted instruction

seemed, on the start, to be at all aware of the importance of a correct position for holding the Flute, and that persons who persevere in a wrong course in this respect rarely, if ever, make creditable performers. My own experience would sustain these conclusions, and so, I suppose, would that of my readers. This habit is caused mainly by an habitual stooping position of the body, and much physical injury often results from this cause. An erect position of the body is as necessary to the free action of the chest and lungs as is the physical strength; and where injury results from this cause, the playing or the singing is not in fault, but the chaining the action of the respiratory organs. The Germans are, of all, the most musical people. Music forms a main part of their education. The greatest composers and performers originated among the Germans; and who does not know, that although the Germans have a very rigorous and changeable climate, pulmonary difficulties are seldom known among them. Now, I wish to set the amateur right in respect to a correct position, and show him, if he will follow my directions, that he can not only acquire a pleasing accomplishment, but a healthy and well-developed chest in the use of the Flute.

Fig. 5.

In the first place, study the position of Fig. 5. Observe with what ease and grace it stands; how well developed the chest; how easily the head is balanced on the shoulders. He is not afraid to look you in the face; he stands erect, like a man. A person of this figure will get through the world much easier than one of your round-shouldered, sneaking kind. Now, before you again take up your Flute, place yourself in the attitude of this figure; at the same time inhale your lungs full of air, and retain it, allowing it to pass off gradually; jerk your elbows back until the shoulder blades lie flat with the back;

make frequent use of this exercise until it becomes natural. Fig. 6 is a wrong position for holding the Flute, but a little observation will convince the reader that nine tenths of the Flute amateurs hold the Flute in this position. I have drawn it in a sitting posture, as it is thus that bad habits are mainly acquired. As far as practicable, a standing posture is the best while playing the Flute. If accompanying the piano, or other musical in-

Fig. 6.

strument, do not stoop over the copy of another, but have your music elevated nearly to a level with your face. Fig. 7 is the correct position for holding the Flute while sitting, and if frequent resort is had to studying the position of Fig. 5, this will become the most natural one, and a finely-formed and well-developed chest will be the result. No injury can result from giving the lungs suita-

Fig. 7.

Fig. 8.

ble exercise when they are not shackled in their action by the chest bone and shoulders resting upon them. The above hints will prove acceptable to many—they *should be observed by all.*

My advice to those who are predisposed to weakness of the chest or lungs is, not to discontinue or refrain from the use of an easy-toned wind instrument, from fear of injury, for its action upon the chest is precisely similar to the inhaling tube, which is now made the main remedy in the treatment of pulmonary affections; regard must be had, however, to stated times, and practice should not be so far protracted as to cause fatigue.

Scale of Prices of the Bœhm, Diatonic, and Ordinary Flutes.

The price of the Bœhm Flute is necessarily higher than the ordinary one, as the amount of time necessary to complete a first-rate instrument of the Bœhm kind is about three times that required for a $45 eight-keyed Flute. I have reduced the price of the Bœhm to the lowest mark, in order to remove, as far as possible, the high-price objection to its adoption, and my present price for the instrument is lower than in England or Paris. I have been frequently solicited to make the keys and mountings of brass or German silver, but I have thus far induced such to pay the extra difference and have the sterling silver, which I use perfectly pure and unalloyed. I have never yet positively refused to make the

Bœhm with other than silver mountings, but would much prefer to not thus disgrace so beautiful an instrument.

Bœhm Flute, of best Jamaica cocoa wood, cork joints, in case complete, German silver keys	$45
Same as above, with silver keys	55
Same as last, with keys for shakes, and exceptional fingerings, with furniture complete	70
Same as last, with English pattern keys	75
" " " with silver sockets and banded tenons	80
" " " with silver mouth-piece	85
" " " with metal stops, C keys	90
" " " with silver engraved top and foot	95
" " " with silver grease box and silver-mounted furniture, with first quality case	100

Fig. 8 is a cut of the Bœhm Flute, with the head joint detached, showing the arrangement of its holes and keys, with the keys for shakes and exceptional fingerings, which keys are all included in the higher-priced instruments.

The Diatonic Flute (so called) is one of the many modifications of the old Flute suggested by Bœhm's invention. The object of this invention is to give to the professor of the old Flute a better instrument than the ordinary one, and retain his old habits of fingering. The design of the inventor is in many respects realized. The smothered and incorrect E and A of the old Flute are in this instrument rendered clear and full by placing the holes for these notes in the same position they occupy on the Bœhm, and the physical inability of the fingers to reach these holes is obviated by stopping them with open standing keys. The accompanying cut will fully illustrate this. Fig. 9 is the middle section of the Diatonic Flute, showing the arrangement of the open standing keys of the E and A, which is the only striking peculiarity and difference be-

Fig. 9.

tween this Flute and the ordinary one, in the arrangement of its keys. The finger holes are all much enlarged, and much the same, compared in size and distance, to the Bœhm. The bore of the Diatonic is also much improved, consequently the tones are full, and the tone and tune of the entire instrument is very much in advance of the old Flute; but as all previous attempts to reconcile a false system of fingering with a correct position and size of the holes have heretofore proved abortive, so, comparatively, is this one also. I will mention a few of the objections to this arrangement. The old fingering is retained only in the first two octaves; in the third a change takes place in four instances. The fingered C natural of the old Flute is a tolerably good note, and is a convenient fingering for that note in many passages; but in the Diatonic this note is much injured, caused by the change made in the size and position of the A finger hole; this renders it necessary to resort to the B shake key in all cases where a clear, full note is required. The open standing keys of the E and A, as ordinarily constructed,* are an embarrassment to smooth execution. The inventor has not given us a better fingering for F natural, which has always been considered one of the grand defects of the old fingering. He has not given us the open keys for the shut system, and, in short, his Flute lacks in many essentials the advantages secured by the Bœhm system. Shortly after this Flute made its appearance I sent direct to the patentee, Mr. Siccama, of London, for one of his best, and I have made, and make still from this pattern, of the best material, in every respect equal to the original, as follows:

Diatonic Flute with silver keys, C key metal stop, hung in wood. $45
Same as the above, keys hung in silver studs, cork joints, English pattern keys, in case, with furniture complete.... 65
Same as the above, with silver mouth-piece 70
Same as the above, with engraved top and lower end cap finish.. 75

* I have made an improvement in the arrangement and construction of the open keys of the Diatonic Flute, which renders the execution smooth, and does away with the noise, which is a necessary accompaniment when constructed in the usual way.

Mr. Kyle, the eminent Flutist, in connection with myself, have much improved the scale and arrangement of the keys of the ordinary eight-keyed Flute. We have brought up the holes of the lower key notes, and arranged the C keys to work across the joint instead of horizontally. Fig. 10 is a cut of the improved eight-keyed Flute, with the lower joint turned a little inward, showing the arrangement of the C keys. By this arrangement the lower notes are not so flat as is usual with most eight-keyed Flutes, and these keys work and stop much easier than the old method. This Flute is a pattern of Mr. Kyles' old eight-keyed Flute, with which he won so much renown.

Fig. 10.

I make this Flute, with either large or small holes, of best Jamaica cocoa wood, keys hung in German silver studs, and German silver keys in case.. $25

Same as the above, with silver keys and mountings, cork joints, morocco case, with furniture complete. 35

Same as last, with metal stops, C keys 40

" " " with silver mouth-piece 45

" " " with silver engraved top and foot-piece.. 50

" " " with silver sockets, English pattern keys, jewel in screw center 65

" " " with the addition of G sharp and B flat shake keys..... 70

Superior Flutes of every description manufactured to order in the most elegant manner, of the best seasoned and prepared Jamaica cocoa wood, fine sterling silver mountings, and each instrument will be inspected by a competent professor, and a certificate given, if required. Persons ordering Flutes from a distance can exchange within a limited period, should not their first selection fully meet their approbation.

Common Flutes from $1 50 upward constantly on hand at wholesale and retail.

List of Instruction Books, Music, etc.

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CLINTON'S SCHOOL FOR THE BŒHM FLUTE $4 00

This is a work of seventy-five pages, by John Clinton, Professor of Music, of the Royal Academy of Music, London. It is intended for the beginner upon the instrument, and is the most thorough and complete work for the Bœhm Flute yet published.

CLINTON'S ESSAYS ON THE BŒHM FLUTE 2 50

This work, by the same author as the above, is intended for the amateurs of the old Flute on adopting the new. It is very thorough and complete, and contains a large number of popular airs and exercises, suitable alike for the young or more advanced Flutist.

STRAUSS' WALTZES,

Arranged for Flute and Piano .....

PHILIP ERNST'S ALBUM DE FLUTIST,

Containing six numbers of popular airs, arranged as solos for the Flute, each 25

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	Arrangers.	Price.
Overture to Amilie (Rooke)	*Pons*	$0 50
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Overture to Caravan		38
Overture to Cinderella (Rossini)		50
Overture to Italiana in Algeria (Rossini)		38
Overture to Gazza Ladra (Rossini)		50
Overture to Otello (Rossini)		50
Berbiguier's Easy Opus, 59	*Berbiguier*	1 25
La Bayadere Airs, No. 1 (Auber)	*Walchier*	1 00
La Bayadere Airs, No. 2 (Auber)	*Walchier*	1 00
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A collection of Airs arrangod as Cotillions (with figures), for the Flute or Violin. Each No. 38

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Trip to Boston. 'Tis the Scottish Drum.
Evening Song of the Tyrolean Peasants. Lord of the Manor.
Alaric Quadrille. Saxon Dance.
Away to the Mountain's Brow. Mistletoe Bough.
Barcarole from Fra Diavola. Rose of Allendale.
Alpine Maid. Gaily the Troubadour.
Il Pirata Quadrilles. La Cornolia Quadrilles.
Gazza Ladra Air. The Bower.
William Tell. Oh! it was not for me.
Green Hills of Tyrol. La Flora. Ernani Quadrilles.

CONTENTS OF NO. II.

Love Breathes in every Plant. If thou wert my Side.
Bonnie Dell. Now isn't it a Pity. Even as the Sun. Surprise. Bride.
Let the Toast be Dear Woman, La ci darum. Poachers.
March in Moses in Egypt. Mellow Horn.
Statuse, or Quick Waltz. On yonder Rock Reclining.
La Josephine Cotillion. La Vendome Cotillion.
La Moise Cotillion. La Victor Cotillion. Zampa Quadril

CONTENTS OF NO. III.

La Bayadere Quadrilles. The Challenge.
Falso one, I Love Thee Still. Wood Up.
La Petite Soirée Quadrilles. The Carbineers.
Hark! 'tis the Signal for Meeting. Rose of Peace
Young Agnes. Mariner's Bride. Social Gallop.
A Barque flew o'er the Waters. Highland Minstrel Boy.

CONTENTS OF NO. IV.

La Bayadere Quadrilles, No. 2. Jim Crow. Claro de Kitchen.
Sitting on a Rail. Back Side of Albany. Long time ago.
Sambo's Address. Zip Coon. Jim Brown. Gumbo Chaff.
My Long Tailed Blue. Bone Squash Diavola. Coal Black Rose.
John Nott. Silver Moon. Omnibus Quadrilles. Post Chaise.
Bridal Fête. The Disappointment. Wedding Song. Billy Barlow.
Sweet Birds are Singing. Am I not fondly thine own?

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A collection of choice melodies—arranged with variations for the Flute, by C. Nicholson and others. Each No.....$0 50

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Von Weber's Last Waltz (Variations)	*Berbiguier.*
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Savourneen Deelish	*Nicholson.*
Sprig of Shillelagh (Variations)	*Nicholson.*
Tu Vedria	*Huntley.*
My Love she's but a Lassio yet	*B. Lee.*
Yellow-hairod Laddie (Variations)	*Drouet.*

CONTENTS OF NO. II

Beethoven's Last Waltz (Variations)	*Berbiguier.*
Aria I'l Braccio mio conquise	*T. Bucher.*
Deh non Costringere	*Forde.*
Sounds so Joyful	*Krakamp.*
Portuguese Air	*Nicholson.*
Non Giova il Sospiran	*Forde*
We part to meet no more	*C. Saust.*

CONTENTS OF NO. III.

Il est trop trad (Variations)	*Clinton.*
O cara memoria (Variations)	*Diabelli.*
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La Retour de la Tyrolean	*Clinton.*
Les Souvenir des Pays (Variations)	*Clinton.*
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THE FLUTIST'S REPERTOIRE,

A collection of Songs, Marches, Waltzes, Polkas, and Mazurkas, arranged as Solos, Duetts, and Trios, for the Flute or Violin, in numbers, each $0 50

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Mi pizzica mi stimola. Isle of Beauty, fare thee well.
Hark! 'tis the Signal of Meeting. Walch's Military Waltz.
Bonaparte Crossing the Rhine. Evening Song to the Virgin (Duet).
Von Weber's Last Waltz. Minstrel Savoyard. Gift (a Cotillion).
Green Hills of Tyrol. Marseilles Hymn (Trio).
Behold how Brightly breaks the Morning (Trio).
Poor little Love. Wilt thou meet me there, Love?
No, I will sigh no more. Leonore. Helen Trevor.
Lightly Here (Duet). Yes, I will leave my Father's Halls.
Brigade Quadrilles,
No. 1. Red Coats. 2. L'Amore. 3. Est un Garçon inconstant.
4. Love's Ritornella. 5. Bavarian Girl's Song.
Merry Mountain Boy. Herr Cline's Dance. Trio, by Staunton.
Buona Notte. La Parisienne. Centennial March
Auld Robin Gray. Le Sylph de Braddock.

CONTENTS OF NO. II.

Light Bark. We Met. Sailor's Tear.
Once a King there chanced to be. Morning its Sweets is flinging.
Beautiful War. Strike for Tyrol and Liberty.
Captain Winthrop's March. Otis' Quick Step.
Sigh not for Summer Flowers. As it Fell upon a Day (Duet).
Challoner's Sett of Gallopades, Nos. 1, 2, 3, 4, and 5. Opera Waltz.
Maid of Langollen. See our Bark (Trio). Here do we meet (Duet).
La Dame Blanche Waltz. Steamboat Quick Step

CONTENTS OF NO. III.

New Vienna Waltz. Alaric Quadrilles, by Herz.
He passed as if he knew me not. Rondoletti by Diabelli.
Scottish Drum. Rose will cease to blow. They tell thee, perchance.
Post Horn Waltz. Trip to New York. Admiral Franklin.
Faithless Isabel. Corsair's Bride. My Heart's True Blue.
Hunter, let thy Bugle blow (Duet).
March in Cataract of the Ganges (Trio).
Tyrolese Peasant's Song (Duet). Foresters Sound the Cheerful Horn.
March on for the Lad. Moon is up. Lord of the Manor.
Leipsic Gallopade. Saxon Dance. Almack's Waltz.
Round my own pretty Rose. Mazurka. Meet me at Sunset.
La Vestale Waltz. Navarino March.
Look from thy Lattice, love (Duet). Spring Quadrilles, by Herz.

CONTENTS OF NO. IV.

Away to the Mountain's Brow. Hunter's Signal Horn.
Gondolier's Song. Are you angry, Mother?
Fare thee well, since we must part. Hours there were (Trio).
Wintertown Waltz. Miss Clark's Hornpipe.
Quick Step, by Hewitt. Go, forget me (Duet).
Tompkins Blues' Quick Step.
Nahant March. Italian Quick Stop.
Isabella Waltz. Spanish Dance. Music Floats in the Air.
In Light Tripping Measures. Softly, Softly, in a Whisper.
Hark! the Vesper Hymn is Stealing (Duet).
Captain Vincent's Quick Step.
Massaniello Quadrilles—No. 1, Market Chorus.
No. 2. Barcarole. No. 3. Fisherman's Chorus.
No. 4. From the Overture.
He's Coming from the Mountains.
Bonnie Lad. I never can love thee more.
Philadelphia Hop Waltz.
Waltz, as performed by the Boston Brass Band

CONTENTS OF NO. V.

My Sister Dear. All by the Shady Greenwood Tree.
Trio, from Maid of Judah. When the Trump of Fame
Oh, they Marched through the Town.
Lauriette (Duet). Come where the Aspens Quiver.
Waltz, by Gilbert. Quadrilles, by Paganini, 1, 2, 3, 4, and 5.
Oh! Mount thy bright. Cease, busy Fancy. Message.
One word with me. Spanish Dance.
Scots wha hae. Spanish Dance, No. 2.
Hasten by Starlight. Udite tutti Redite.
Oh! Nanny (Duett). Mazurka.
Gli Arab Gallop. List, Hermit! list
Why hast thou taught me to Love thee?
Kathleen O'More. Captain Paige's Quick Step.
Little Mountaineer. Prince Leopold's March.

CONTENTS OF NO. VI.

Alpine Maid. Adieu, my Native Land.
Garde à vous (Trio). Brave Mountaineer.
Lightly my Heart. Grenadier.
Meet me by Moonlight (Duet). Trumpet pas re double
Airs from Le Dame Blanche, 1, 2, 3, 4, and 5.
Rose of the Desert. Oh! Sing from the Spray.
La Flora (Duet). Waltz (Duet).

We Met. Snuff Box Waltz. Bowor.
British Grenadier March (Trio). Air in Nina.
Come dolce (Tancredi). Non piu Mesta.
Quick March Variations (Duet).
Minuet in Don Juan (Trio). Tivolian Waltz. Sentinel.

CONTENTS OF NO. VII.

Postillion of Longuemeau. With your little Wife. New Cachuca.
Mazurka. I have Riches, thou hast Beauty.
Cracovienne. Are there tidings. Oh, leave me to my Sorrow.
Kind, kind and gentle is she. We soon shall meet again.
Jim along Josey. Peter's Highland March.
Kentucky Rifiemen's Quick Step. Cincinnati Hop Waltz.
New York Brass Band Quick Step.
Fra Diavola Quadrilles. No. 1. Lorenzo.
No. 2. Lord Allcash. No. 3. Fra Diavola
No. 4. Zerlina. No. 5. Lady Allcash.
Old House at Home. We can love no more.
Oh, would I were a Boy again. Oh, how lovely, how dear to me.
Hewitt's Quick Step. Oh, my love's bonnie.
Maid of Florence. Io Ludia.
Wrecker's Daughter's Quick Step.
Village Chorister (Trio). Come, play me that simple Air again.
All must yield to my voice. Corsair's Song, from Zampa.

CONTENTS OF NO. VIII.

Spot where I was Born. Pulaski Guard's Quick Step.
There is an Isle, a bonnie Isle. Rose that blooms in yonder Vale.
Oh, take me back to Switzerland.
Johnny Boker. Air from Lucia di Lammermoor.
Waltz. Rose that opes at Morn.
Scotch Grand March. Old Tare River.
My Bonnie Highland Lass. She never told her Love.
Gayly now the hours employing.
Ambassadrice Quadrilles, Nos. 1, 2, 3, and 4.
Waltz by Auber. My home is there.
There is no land like Scotland.
Bronze Horse Quick Step. Brewer of Preston Gallop.
There Protects, there Defends me.
Ah! Dearest, once more returning.
Pray with thee. See, O Norma. Norma Grand March.
Yes, to the latest hour (Duet). Rory O'More.
Duke of Reichstadt's Grand March.
Tho Serenaders (Trio). Miss Flora MacDonald's Reel.
Pas Styrien. Tippecanoo Hornpipe Portrait Charmant (Trio).

CONTENTS OF NO. IX.

My Soldier wears a Tartan Plaid.
Mary, of Argyle. Swiss Peasant's Song.
Burdett's Quick Step. Fanny Ellsler's Waltz in Nathalie.
Woodland Call (Duet). Taglioni Gallopade.
Vive l'Amore. Miss Lucy Long.
Light Guard's Gallop. City Guard's Gallop
Love Spell Quadrilles, Nos. 1, 2, 3, and 4.
Kate Anderson, my Kate.
Lochlin and Eveline. Bonnie Bessie Green.
Time was thy Locks were Brown. Dream is past (Trio).
Oh, speak to her in kindness. Bonnie Charley. Evil Eye Waltz.
El Sapatio de Cadiz. Come, dwell with me.
Hewitt's Quick Step (Trio). Col. Peers' Parade March.
Grand March of the Rainor Family.
Let me rest in the Land of my Birth.
Poveno Signora. Col. Doyle's Quick Step. Waltz, from la Fiance.

EGAN'S SCALE FOR THE FLUTE. $0 75

FLUTE AND PIANO.

	Arrangers.	Price.
Casta Diva (Norma)	*Forde*	$0 38
Fall of Paris	*Cuddy*	50
Home, Sweet Home	*B. Lee*	50
Tu Vedria	*Forde*	50
Opera of Cinderella, in four books, each	*Mazzinghi*	75

This sett contains all the favorite melodies from this popular Opera, beautifully arranged for the Flute, with Piano accompaniment.

I have made arrangements by which I can supply any piece of music ever published, at the usual rates.

Orders from a distance should be accompanied by a remittance.

Particular attention will be paid to repairing, tuning, and regulating old instruments.

[PREFACE TO THE SECOND] EDITION.

Time rolls on, and with it the march of intellect. Old ideas are giving place to more enlarged views. Men may, from interested motives, do much to retard, yet can not wholly prevent the world's progress.

Scarcely one year has elapsed, and I am called upon to issue another edition, of one thousand copies, of my "Illustrated History of the Flute." This is the only work in which the peculiar merits of the various kinds of flutes now claiming the attention of flute-players, are fairly and philosophically stated; and the *modus operandi* is so clearly pointed out, that no one need err therein. Men do nowadays think for themselves; when told that black is white, or white black, or that the instrument known as the old, or German flute, contrived in a primitive age of the world, is superior to the modern article, as improved by Bœhm, he will at least stop and consider the matter; and if his reflective faculties are developed to the extent usually vouchsafed to humanity, he will very soon perceive that the principles involved in the construction of the Bœhm flute are as lasting as the Galilean system of astronomy, and must just as surely come into general acceptation.

Truth finds its way through strong barriers. The professor or amateur who adopts the Bœhm, or perfect system, soon finds his tune, tone, and execution vastly improved; and he will inform his amateur friend of the much greater satisfaction he experiences, and pleasure he imparts to his listeners. And so the truth spreads.

"Truth, crushed to earth, shall rise again,
The eternal years of God are hers;
While error lingers, writhes in pain,
And dies amid her worshipers."

APPENDIX.

The following, from William M. Pray, a distinguished professor of the Bœhm flute, of Boston, will explain itself:

"Boston, May 3, 1853.

"A. G. Badger, Esq.:

"Dear Sir: Some few days since I received a copy of your "Illustrated History of the Flute," for which I thank you. Also your note, in which you allude to a letter you addressed to me while collecting matter for the same, and your disappointment in not having a testimonial from me respecting the "superior excellence of the Bœhm flute." I regret your disappointment, but must exonerate myself, as I did not receive your letter. As you are about to issue another edition of your work, I most cheerfully add my testimony in favor of the new or Bœhm flute, which I have carefully studied for more than three years. For accurate intonation, equality, purity, and freedom of tone in all the keys, I regard it as superior to any other flute with which I am acquainted.

"In conclusion, permit me to congratulate you on your success in the manufacture of instruments requiring such masterly skill, and to acknowledge the prompt and workmanlike manner with which you have executed all orders for myself and pupils.

"Yours very truly,

"Wm. M. Pray."

The sheet known as *The Musical World and Times*, published in New-York, which advertises extensively for several of our large music-warehouses and makers of the old flute, has seen fit on various occasions to misrepre-

sent me in the instruments I manufacture. Heretofore I have taken no notice of these animadversions. The gauntlet was, however, taken up by a customer, Mr. Samuel Schooler, Professor of Mathematics in the University of Virginia. Read him:

"TAYLORSVILLE, Va., Oct. 12, 1853.

"DEAR SIR: May not a subscriber and constant reader endeavor to correct a misapprehension into which you seem to have fallen, in your reply to the inquiries of 'C. F. H., of Salem, N. Y.,' in regard to the Bœhm flute? (See your paper of 8th current.) I would not presume to intrude my poor experience on the attention of yourself and your correspondent, but that I have been from my boyhood a warm admirer of the flute; and, therefore, feel particularly interested in any thing relating to its improvement. Moreover, I have observed that you endeavor to obtain the most reliable information for your friends on whatever topic, connected with music, may come up. In the present case, I think that *experience* is certainly worth something, and with your permission, I will briefly detail my own. After practicing many years on flutes of the ordinary construction, with from one to six keys, I purchased a very fine eight-keyed flute of London make. It is certainly the best flute of the kind I have ever seen; being made on Nicholson's plan, with large holes. This instrument cost $75 in London. After using it several years, and having attained some facility of execution, I saw the Bœhm advertised, and made inquiries in every direction concerning it. Many advised me against purchasing either that or the diatonic, saying that the scale was so entirely different, that I should be compelled to commence anew. I determined to try it, however, and about six months since ordered my present Bœhm, which is made in the most superb style. I practiced it no more than a common one, but at the present time I can play, at sight, much more difficult music than I could on my old flute. You inform your correspondent that not one in fifty has the patience to learn the Bœhm, and that its difficulties are very numerous. Now I know of many performers who have exchanged the old for the Bœhm, and *not one* has ever regretted it, or returned to the ancient method. I can conscientiously say, as to the difficulties, that I consider the Bœhm scale *much* easier than the other. The only notes changed in the first two octaves are C and F, and B flat; and the new fingering is decidedly easier in every respect. Moreover, the instrument *is perfectly in tune in every key*, which the old one is not. The tones, also, are so full and clear, and produced with so much ease, that no one having heard them can well endure the smothered and incorrect

tones of the German flute. As to diatonic flutes, I know very little, except that there are *four* changes of fingering in the third octave; and that, while some of the notes are improved, others are injured and made very difficult of smooth execution. My old flute was from one half to a whole tone above every other instrument I ever saw, whether flute or piano, and consequently would not perform well when lowered by the slide. On the contrary, my Bœhm is perfectly true to the tuning-fork, and exactly at concert-pitch. I think you mistake in regard to the price of the Bœhm. Mine was made by Mr. A. G. Badger, of 181 Broadway. I gave him *carte blanche* to make me the best flute he could, and he made me a splendid one. It is lined with silver; has sockets and tenons, cork tip, rings, mouth-piece, top, and bottom, all of silver, beautifully engraved. It has silver holes, silver cleaner, pomatum-box, etc., and a splendid silver-mounted morocco case. The whole cost $125. The lowest-priced Bœhm cost $45. The lowest-priced diatonic costs about $40. If your correspondent will drop a line to Mr. Badger, at 181 Broadway, he will receive the fullest information, and may be certain that, should he order of him, he will get a capital instrument.

"Please excuse my long note. I could not see so much misapprehension about the most perfect of wind-instruments without endeavoring to correct it. The Bœhm has certainly the most mellow, *round* tone, so to speak, that I have ever heard, and it is nearly perfect in the harmonies. In concerted music it is unequalled; the sweet, harmonious grandeur of its tones standing out in bold relief on the background of the other instruments.

I am, my dear sir,

"Yours very truly,

"Samuel Schooler."

"[We willingly defer to the evidently better knowledge of flutes on the part of our correspondent. The information we gave, by the way, was based upon the opinion of a friend conversant with the flute; we having ourselves no experimental knowledge of the instrument.—Ed.]"

The following certificate was voluntarily offered to the manufacturer from the author of the preceding:

"Hanover Adademy, near Taylorsville, Va., April 8, 1854.

"This is to certify that about one year since, I commissioned Mr. A. G. Badger, 181 Broadway, New-York, to furnish me the best Bœhm flute that he could make. The instrument was completed in about six weeks, and I have played on it ever since. Desiring to advance as much as possible the use of the flute among amateurs and professors, I take pleasure in stating the results of my experience in the Bœhm system. From boyhood I had played on the eight-keyed flute, made after Nicholson's plan; and while my instrument was a very fine one of the kind, I was constantly led to remark its imperfections, which are inherent in all flutes having holes of different diameter and placed at unequal intervals. The prominent defects of the old system, in its most improved state, are in the *quality* and *volume* of *tone;* in the *variations of fingering;* and in the *imperfect harmonics*. All performers on the flute have observed these faults in the instrument constructed on the old plan. I am happy to state, after a careful and entirely disinterested trial, that Mr. Badger's instrument completely removes *all* of the difficulties alluded to above. The tone is exceedingly powerful, and equal through the entire scale. The semi-tones are perfect; the scale is *true in every key;* the harmonics are *easily produced*, and much more full and true than on the old system; and in addition to these advantages, the fingering has but few variations, making it easy to play in any key. I have heard that it is supposed that the fingering is very difficult, especially to one who has learned that of the common flute. There is certainly some little difficulty, in the beginning, to the latter class of performers, but I am happy to say that they vanish almost immediately; in fact, so soon as the learner becomes accustomed to the at first novel form of keys. I am very certain that more can be learnt in one year on the Bœhm flute, than in three years on the old system. Many passages in the works of Ribas, Briccialdi, Drouet, Clinton, Nicholson, Forde, Saust, Kohler, and others, which require unremitting practice on the ordinary flute, are rendered at once easy and smooth on Bœhm's system, as applied by Mr. Badger.

"Please observe that I take pleasure in increasing your fame, so far as I can, for several reasons, namely: First, I want every body to play on the Bœhm. Secondly, I want to do my best for any body who has

done his best for me. And lastly, but by no means least, I have found you a gentleman in your promises and performances, and also in the little intercourse I have had with you.

"Hoping that the Bœhm flute may sound from Maine to Mexico; that each one of them may have stamped thereon, 'A. G. Badger, 181 Broadway;' and that every one of your customers may be as well satisfied as myself, I am, etc., SAMUEL SCHOOLER."

The annexed extract from a private letter from a long-celebrated and distinguished amateur, Cashier of a Bank in Albany, N. Y., seems satisfied with the change he has made:

"Your flutes on the Bœhm principle are so far superior to any others of that or any other kind, that I hope you will meet with the success you honorably deserve, in manufacturing them. I am confident that no person who becomes familiar with the fingering of the Bœhm flute will refuse to acknowledge its great merits, and vast superiority over any other instrument of the kind. J. B. WILLIAMSON."

The following testimonial from a Yale College student, who was formerly an amateur of the old flute, became finally disgusted with it, and procured a Bœhm, but had the misfortune to get it in the wrong place. See what he says after receiving one of Badger's. Mr. ——— is a whole-hearted Southerner, and knows when he is well used. He sarcastically alludes to the maker of his first Bœhm in the words italicized:

"NEW-HAVEN, June 14, 1854.

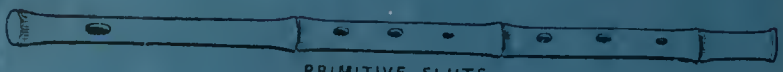
"MR. BADGER:

"DEAR SIR: The flute came to hand this morning. The bill was settled with the express agent. If you ever have hit the right nail square on the head, you have done it this time. I expected great things, but did not expect enough. To say that I am *satisfied* is not enough; to say that I am *pleased* may be a little better; but the only way that I can give you an idea of my 'elevation' is to tell you that for about three hours after I opened the case, I was half-crazy; and

you will doubtless perceive, by the tenor of this letter, that I have not yet fully recovered. Mr. A——, and every body else that I have shown it to, think as highly of it as I do. The tone is as good as the exterior, and they both are *superb*. Well! I don't know what else to say; only, that if any of my friends ever want Bœhm flutes, you shall make them; but as for myself, I think it *very probable* that I shall, after this, employ a *block and pump-maker*, or a *ship-carpenter*, to make my flutes. May your shadow never be less! Yours most truly,

"——."

M. Reichardt, the first solo flutist brought out by M. Jullien, whose performances exceeded, in brilliancy of tone and execution, any thing heretofore heard in this country, adopted the Bœhm flute in the early party of his musical career, and uses no other.



PRIMITIVE FLUTE.

FLUTE-A-BEC; OR, ENGLISH COMMON FLUTE.
(See page 7.)

OLD GERMAN FLUTE, AS IMPROVED BY PHILLIBERT.
(See page 8.)

JOINT OF THE IMPROVED EIGHT-KEYED FLUTE, DENOMINATED THE DIATONIC FLUTE.

A. G. BADGER & CO.

MANUFACTURERS OF

BADGER'S IMPROVED BŒHM FLUTES,

181 BROADWAY, NEW YORK.

No. 1.—Badger's Improved Cylindrical Bœhm Flute, of Wood, Hard Rubber or Ivory.

PRICE, to C, $100 to $120; to B, $130 to $140.

No. 2. Badger's Improved Cylindrical Bœhm Flute, of Silver.

PRICE, to C, $125; to B $140.

No. 3.—Badger's Improved Parabolic Bœhm Flute.

PRICE, $65 to $115.

TO THE READER.

Since the publication of Badger's "Illustrated History of the Flute, several very important improvements have been made in the construction of the instrument. These have removed difficulties, which hitherto existed, and have rendered the "Boehm as complete an instrument as the most fastidious performer can desire. B flat can now be produced by the same motion of the left-hand thumb, as on the ordinary flute, thus obviating one of the greatest objections to a change from the old to the new instrument.

The entire mechanism of the Flute has been vastly improved, and the charge that "It is liable to get out of order," can not now be brought against it by any one capable of estimating its merits. We also make the flute with the cylinder or straight bore, with keys to stop the holes instead of the fingers, which renders it almost impossible for a performer to fail of closing each hole as soon as his finger touches the plate lying so conveniently under it.

The above mentioned style of bore renders playing in the third octave vastly easier, as all the tones are produced with very little exertion. This last fact, all performers on the old flute will be glad to hear, for nothing can be more torturing to a refined ear than what Count D'Orsay called "the wheezings of a dyspeptic flute."

We have now effected arrangements for the manufacture of these flutes in the most perfect and substantial manner, and all parties, who order our instruments, may rest assured that no pains will be spared to satisfy them in every particular.

A. G. Badger, the original manufacturer of the *Boehm Flute*, in this country, after twenty-five years of steady success in the various departments of flute making, can now say that the Boehm system, with all its late improvements, has become a fixed fact in the great world of music, and that, in such, it has secured the admiration of all lovers of that instrument which approaches nearest to the human voice in sweetness and purity of tone. This admiration shows itself, especially in the desire of many, hitherto careless of the flute, to possess themselves of one which shall realize their ideas of what such an instrument should be. Hence, the demand for this perfect flute has greatly increased, so much so, in fact, that additional assistance has been found necessary.

We have now expended over two thousand dollars, in tools and machinery for the more perfect construction of our flutes, and we are satisfied that they are as complete as science and art can make them.

It shall be our endeavor to render the instruments we manufacture fully equal, if not superior to any others, and to execute all orders for them with despatch.

OUR FLUTES, AND OUR ACCOUNT OF THEM.

Cut No. 1—Represents our Cylindrical or Straight-bore Boehm flute. The walls of the tube are perfectly parallel and all the holes are closed by keys which are placed quite near each other, and music can be executed upon them with as much facility as upon the Piano Forte. All the tones are produced with the greatest ease throughout the entire register, in perfect tune, and with a tone remarkably sweet, brilliant and powerful.

No. 2—Is our cylindrical Boehm flute, made entirely of Sterling Silver, and is very easy to fill. It can be played very soft, and can be increased to almost the power of the cornet. The tone does not at all partake of the metallic quality that might be supposed to belong to a metal instrument. It is exceeding liquid and pure, and is much admired by the professors and the better class of amateurs.

No. 3—Is our Improved Boehm flute, with the taper or parabolic bore as we formerly made them, with the exception that we have so changed the bore, and improved the machinery, as to make it far superior to those made previously, and, as there is less labor required in making them than the cylinder bore, they can be afforded at a lower price.

There are persons of the largest experience who differ as to the best tone-producing material for the flute. We have many customers, both professors and amateurs, who are using our Straight-bore flutes of silver, and give them a decided preference, after fully testing those made of wood and other materials, there are others who as strenuously insist that cocoa or hard rubber are a better material. As far as our experience goes, we are satisfied that the more solid, and, at the same time, vibratory the material, the better for producing a powerful, brilliant tone, and when there is so much labor expended as there is upon the Boehm flute, is of the greatest importance that it should be made of a material not liable to the contingency of splitting.

Persons desiring copies of Badger's Illustrated History of the Flute, will please address

A. G. BADGER & CO., 181 Broadway.

For prices, &c., of our eight-keyed Flutes see page 41 of the History of the Flute. Persons desirous of procuring a first-rate eight keyed Flute, may be sure of getting of us the very best, whether made in this country or Europe.

A. G. Badger & Co., American Publishers of Clinton's Complete School for the Boehm Flute. 100 pages, folio.

All our Flutes are put up in elegant Morocco Cases, with the usual furniture.

DIRECTIONS FOR TAKING CARE OF YOUR FLUTE.—Never oil the flute outside, or in, but when through playing, wipe dry and lay away in the case: never disturb the cork, all changes of the pitch must be effected by the slide.

A. G. BADGER & CO.,

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*Those marked * use our Silver Flutes.*